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10/808,811	03/25/2004	Yoshinori Tanaka	FUSA 21.076	7590

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EXAMINER	
ROSE, KERRI M	
ART UNIT	PAPER NUMBER
2416	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/808,811	TANAKA ET AL.	
	Examiner	Art Unit	
	KERRI M. ROSE	2416	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 August 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *15,16,18-21,23,24,35,36,38-40,42-45,47,49,51 and 53* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *15,16,18-21,23,24,35,36,38-40,42-45,47,49,51 and 53* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Please note AU 2616 is now AU 2416.

2. Applicant's arguments, see page 14, filed 8/14/08, with respect to claims 45, 47, 49, 51, and 53 have been fully considered and are persuasive. However, upon further consideration, a new ground(s) of rejection is made in view of new reference, Moon et al. (US 2003/0097629).

3. Applicant's arguments filed 8/14/08, with respect to claims 15, 16, 18-21, 23, 24, 35, 36, 38-40, and 42-45 have been fully considered but they are not persuasive.

4. Applicant argues on page 16 that McFarland does not reach retransmission and combining a retransmitted packet with a previously received and stored packet. First, col. 1 lines 32-37 indicate a file must be re-sent, i.e. *retransmitted*, if at least a portion is not received correctly. The goal of McFarland is to reduce traffic due to *retransmission* by only *retransmitting* the portions of the file that were not correctly received. Second, there are several reasons why McFarland must teach recombination of retransmitted data with stored packets. In the broadest sense data includes audio, video, and "plain" data such as e-mail. In the case of audio and video the retransmitted packets must be recombined with the stored packets because audio and video use MPEG-2 encoding. MPEG-2 consists of I-, P-, and B-frames. P-frames depend on information in preceding frames for proper decoding. B-frames require information from the preceding and following frames for proper decoding.

In order to properly decode an entire file in which portions have been retransmitted according to the method taught by McFarland the retransmitted portions *must* be combined with the previously stored portions. "Plain" data must also be recombined for decoding and presentation to a user. Another reason is described by McFarland is regards to figure 2. Figure 2 illustrates the method for determining if the file has been completely received. Col. 4 lines 25-31 indicate the retransmission may continue as long as the file has not been completely received. After each retransmission iteration, the retransmitted packets must be added, i.e. combined, with the successfully received packets. At the start of the next iteration, the recombined data is inspected to determine the next portion that requires retransmission. Finally, applicant admits retransmission combination is known in the art in fig. 20 element 4c.

Applicant argues on pages 13 and 16 that Rathonyi does not disclose attaching a modulation parameter and comparing a first parameter that has been attached to retransmit data to a second parameter that has been attached to previously received and store data. Rathonyi states in col. 5 lines 19-21 that it is impossible in conventional systems to retransmit packets if the transmission rate changes. Rathonyi then states in col. 6 lines 35-40 that a goal of his invention is to allow retransmission with a changed rate. The description of the first embodiment beginning at col. 7 line 36 details how transmission rate information is encoded into the packet using packet size and sequence numbers to allow for variable rates at retransmission. Therefore, Rathonyi does disclose comparing attached parameters.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 40, 42-44 are rejected under 35 U.S.C. 102(b) as being anticipated by Rathonyi et al. (US 6,359,877).

7. In regards to claim 40, Rathonyi discloses a buffer (col. 8 lines 28-29); deciding a modulation parameter based upon conditions of the propagation path (col. 7 lines 37-44 [packet size, rate, or sequence numbering may be changed]); and deleting a packet that has been successfully transmitted (inherent because buffer space is not infinite) or retransmitting a packet for which reception has failed (col. 9 line 62 – col. 10 line 3 and col. 10 lines 18-30).Rathonyi discloses retransmitting a plurality of packets as a single transmission with respective identifying information (col. 10 lines 18-30 and 57-67; If retransmitted packets are consecutive they can be combined and use one sequence number. However, if they were not consecutive they retain their individual sequence numbers.).

8. In regards to claim 42, Rathonyi discloses retransmitting part of a packet (col. 9 line 62 – col. 10 line 3).

9. Claims 43 and 44 are rejected upon the same grounds as claims 40 and 42 respectively.

10. Claims 45, 47, 49, 51, and 53 are rejected under 35 U.S.C. 102(e) as being anticipated by Moon et al. (US 2003/0097629; provided by applicant).

11. In regards to claim 45, Moon discloses a transmitting apparatus (fig. 5 discloses a transmitter) capable of executing retransmission of packet data when the packet data cannot be received correctly on a receiving side, said transmitting apparatus comprising: a transmission parameter controller which changes a transmission parameter in accordance with the conditions of the propagation path (paragraph 70 describes modifying parameters in accordance with changing path conditions); and a controller which obtains a plurality of divided packet data by dividing packet data which has been transmitted and conducts retransmission of the plurality of divided packet data respectively based on the transmission parameter (paragraph 69 and fig. 14 describe dividing a packet into a plurality of sub-packets), wherein each of the plurality of the divided packet data includes only a same and single number information as number information of the packet data which has been transmitted (paragraph 78 and fig. 14 disclose maintaining the number information during retransmissions. No other number information is disclosed as being added.)

12. In regards to claim 47, Moon discloses a transmitting apparatus (fig. 5 discloses a transmitter) capable of executing retransmission of packet data when the packet data cannot be received correctly on a receiving side, said transmitting apparatus comprising: a transmission parameter controller which changes a transmission parameter in accordance with the conditions of the propagation path (paragraph 70 describes modifying parameters in accordance with changing path conditions); and a controller which obtains a plurality of divided packet data by dividing packet data which has been transmitted and conducts retransmission of the plurality of

divided packet data respectively based on the transmission parameter (paragraph 69 and fig. 14 describe dividing a packet into a plurality of sub-packets), wherein each of the plurality of the divided packet data includes only a same and single number information as number information of the packet data which has been transmitted (paragraph 78 and fig. 14 disclose maintaining the number information during retransmissions. No other number information is disclosed as being added.)

13. In regards to claim 49, Moon discloses a receiving apparatus (fig. 6 discloses the receiver) which receives packet data which is retransmitted from a transmitter when the packet data cannot be received correctly by the receiving apparatus, said receiving apparatus comprising: a receiver which receives from the transmitter a plurality of divided packet data which are obtained by dividing packet data which has been transmitted to the receiving apparatus and not received correctly, wherein each of the plurality of divided packet data includes same number information as number information of the packet data which has been transmitted (paragraph 69 and fig. 14 describe dividing a packet into a plurality of sub-packets . Paragraph 78 and fig. 14 disclose maintaining the number information during retransmissions. No other number information is disclosed as being added.); and receiving data processing unit which conducts receiving processing by using the number information included in each of the plurality of divided packet data (Paragraph 81 and fig. 14 disclose combining the packets using information such as the packet number.)

14. In regards to claim 51, Moon discloses a receiving apparatus (fig. 6 discloses the receiver) which receives packet data which is retransmitted from a transmitter when the packet data cannot be received correctly by the receiving apparatus, said receiving apparatus

comprising: a receiver which receives from the transmitter a plurality of divided packet data which are obtained by dividing packet data which has been transmitted to the receiving apparatus and not received correctly, wherein each of the plurality of divided packet data includes same number information as number information of the packet data which has been transmitted (paragraph 69 and fig. 14 describe dividing a packet into a plurality of sub-packets . Paragraph 78 and fig. 14 disclose maintaining the number information during retransmissions. No other number information is disclosed as being added.); and receiving data processing unit which conducts receiving processing by using the number information included in each of the plurality of divided packet data (Paragraph 81 and fig. 14 disclose combining the packets using information such as the packet number.)

15. In regards to claim 53, Moon discloses a mobile communication system including a receiving apparatus and a transmitting apparatus (figs. 5 and 6 disclose the system of transmitters and receivers) capable of executing retransmission of packet data when the packet data cannot be received correctly on a receiving side, said transmitting apparatus comprising: : a transmission parameter controller which changes a transmission parameter in accordance with the conditions of the propagation path (paragraph 70 describes modifying parameters in accordance with changing path conditions);

and a controller which obtains a plurality of divided packet data by dividing packet data which has been transmitted and conducts retransmission of the plurality of divided packet data respectively based on the transmission parameter (paragraph 69 and fig. 14 describe dividing a packet into a plurality of sub-packets), wherein each of the plurality of the divided packet data includes only a same and single number information as number information of the packet data

which has been transmitted (paragraph 78 and fig. 14 disclose maintaining the number information during retransmissions. No other number information is disclosed as being added.);

a receiver which receives from the transmitter a plurality of divided packet data which are obtained by dividing packet data which has been transmitted to the receiving apparatus and not received correctly, wherein each of the plurality of divided packet data includes same number information as number information of the packet data which has been transmitted (paragraph 69 and fig. 14 describe dividing a packet into a plurality of sub-packets . Paragraph 78 and fig. 14 disclose maintaining the number information during retransmissions. No other number information is disclosed as being added.); and receiving data processing unit which conducts receiving processing by using the number information included in each of the plurality of divided packet data (Paragraph 81 and fig. 14 disclose combining the packets using information such as the packet number.)

Claim Rejections - 35 USC § 103

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

17. Claims 15, 16, 18-21, 23, 24, 35, 36, 38, and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over McFarland et al. (US 7,212,532) in view of Rathonyi et al. (US 6,359,877).

18. In regards to claim 15 McFarland discloses an apparatus with receiving means (col. 2 lines 61 and 62); buffer means (col. 2 line 60); combining means and extracting means (col. 3 lines 47-51 determine the portion(s) that has not been received correctly. Col. 4 lines 14-17 retransmit the portion. Col. 4 lines 27-31 indicate that the previously received correct packets are combined with the newly received retransmitted packets to form a complete file.) Figure 2 step 24c illustrates data cutting. If the whole file was not received the offset, i.e. where to start cutting, and the length, i.e. where to stop cutting are determined. McFarland does not disclose comparing a first parameter and a second parameter and determining if retransmit conditions are inferior.

Rathonyi discloses comparing the original data rate with the currently available data rate. If the previous packet will not fit within the new parameters, i.e. the retransmit conditions are inferior now because only smaller packets can be sent, the packet is cut into multiple packets, each of a length that will fit within the new parameters (col. 9 line 62 – col. 10 line 3).

It would have been obvious to one of ordinary skill in the art to divide packets as taught by Rathonyi because doing so increases efficient use of resources and maximizes throughput, as disclosed in column 6 lines 35-40.

19. In regards to claim 16 McFarland discloses claim 15, but not decoding the combined data, determining if there is an error; and storing the combined data in a buffer if there is an error.

Rathonyi discloses decoding combined data; determining if there is an error; and storing erroneous data in a buffer in figures 2C and 2D.

It would have been obvious to one of ordinary skill in the art to decode the data, as taught by Rathonyi, because doing so increases efficient use of resources and maximizes throughput, as disclosed in column 6 lines 35-40 in Rathonyi.

20. In regards to claim 18, McFarland discloses discriminating data length (fig. 2 step 24c) and extracting and inputting to combining means a portion of the data having a length equal to said data length (fig. 2. step 24c; col. 3 lines 47-51), but does not disclose determining the data length based upon the first parameter.

Rathonyi discloses comparing the original data rate with the currently available data rate. If the previous packet will not fit within the new parameters the packet is cut into multiple packets, each of a length that will fit within the new parameters (col. 9 line 62 – col. 10 line 3).

It would have been obvious to one of ordinary skill in the art to divide packets as taught by Rathonyi because doing so increases efficient use of resources and maximizes throughput, as disclosed in column 6 lines 35-40.

21. In regards to claim 19, Rathonyi discloses extracting a plurality of packets in column 10 lines 18-30.

22. Claims 20, 21, 23, 24 and 35, 36, 38, 39 are rejected upon the same grounds as claims 15, 16, 18, and 19 respectively.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KERRI M. ROSE whose telephone number is (571) 272-0542. The examiner can normally be reached on Monday through Thursday, 7:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Aung MOE can be reached on (571) 272-7314. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Aung S. Moe/
Supervisory Patent Examiner, Art Unit 2416

/Kerri M Rose/
Examiner, Art Unit 2416